WHAT IS CLAIMED IS:

1. A router for interconnecting external devices coupled to said router, said router comprising:

a switch fabric; and

a plurality of routing nodes coupled to said switch fabric, wherein each of said plurality of routing nodes comprises packet processing circuitry capable of transmitting data packets to, and receiving data packets from, said external devices and further capable of transmitting data packets to, and receiving data packets from, other ones of said plurality of routing nodes via said switch fabric, wherein said packet processing circuitry comprises a first network processor comprising:

N microengines capable of forwarding said data packets, each of said microengines capable of executing a plurality of threads that perform forwarding table lookup operations; and

workload distribution circuitry capable of distributing data packets to said N microengines for forwarding.

2. The router as set forth in Claim 1 wherein said each microengine is capable of forwarding data packets of different traffic types..

3. The router as set forth in Claim 2 wherein said different traffic types comprise IPv4, IPv6 and MPLS.

4. The router as set forth in Claim 2 wherein said first network processor comprises a reader microengine for receiving data packets into said first network processor and a writer microengine for transmitting said data packets from said first network processor.

5. The router as set forth in Claim 4 wherein said first network processor transmits data packets of a first traffic type in the same order that said data packets of said first traffic type were received.

6. The router as set forth in Claim 5 wherein said workload distribution circuitry distributes a data packet to a first thread executed by each of said microengines before distributing a data packet to a second thread executed by any of said each microengines.

7. The router as set forth in Claim 5 wherein said workload distribution circuitry distributes a data packet to a first thread executed by each of said microengines according to a round-robin algorithm.

8. The router as set forth in Claim 7 further comprising a second network processor similar to said first network processor, wherein said first network processor transfers data packets from said switch fabric to external ports of said router and said second network processor transfers data packets from said external ports of said router to switch fabric.

9. A communication network comprising a plurality of routers that communicate data packets to one another and to interfacing external devices, each of said plurality of routers comprising:

a switch fabric; and

a plurality of routing nodes coupled to said switch fabric, wherein each of said plurality of routing nodes comprises packet processing circuitry capable of transmitting data packets to, and receiving data packets from, said external devices and further capable of transmitting data packets to, and receiving data packets from, other ones of said plurality of routing nodes via said switch fabric, wherein said packet processing circuitry comprises a first network processor comprising:

N microengines capable of forwarding said data packets, each of said microengines capable of executing a plurality of threads that perform forwarding table lookup operations; and

workload distribution circuitry capable of distributing data packets to said N microengines for forwarding.

10. The communication network as set forth in Claim 9 wherein said each microengine is capable of forwarding data packets of different traffic types.

11. The communication network as set forth in Claim 10 wherein said different traffic types comprise IPv4, IPv6 and MPLS.

12. The communication network as set forth in Claim 10 wherein said first network processor comprises a reader microengine for receiving data packets into said first network processor and a writer microengine for transmitting said data packets from said first network processor.

13. The communication network as set forth in Claim 12 wherein said first network processor transmits data packets of a first traffic type in the same order that said data packets of said first traffic type were received.

14. The communication network as set forth in Claim 13 wherein said workload distribution circuitry distributes a data packet to a first thread executed by each of said microengines before distributing a data packet to a second thread executed by any of said each microengines.

15. The communication network as set forth in Claim 13 wherein said workload distribution circuitry distributes a data packet to a first thread executed by each of said microengines according to a round-robin algorithm.

16. The communication network as set forth in Claim 15 further comprising a second network processor similar to said first network processor, wherein said first network processor transfers data packets from said switch fabric to external ports of said router and said second network processor transfers data packets from said external ports of said router to switch fabric.

17. For use in a router comprising a switch fabric and a plurality of routing nodes coupled to the switch fabric, each of the routing nodes capable of transmitting data packets to, and receiving data packets from, external devices and transmitting data packets to, and receiving data packets from, other routing nodes via the switch fabric, a method of distributing data packets for forwarding comprising the steps of:

receiving a plurality of data packets in a first network processor of a first routing node, the first network processor comprising N microengines capable of forwarding the data packets, each of the microengines capable of executing a plurality of threads that perform forwarding table lookup operations;

allocating a first data packet to a first thread in each of the N microengines; and

after said first step of allocating, allocating a second data packet to a second thread in each of the N microengines.

18. The method as set forth in Claim 17 wherein each of the microengines is capable of forwarding data packets of different traffic types.

19. The method as set forth in Claim 18 wherein the different traffic types comprise IPv4, IPv6 and MPLS.

20. The method as set forth in Claim 19 further comprising the steps of transmitting from the first network processor data packets of a first traffic type in the same order that the data packets of the first traffic type were received.